DOCUMENT RESUME

ED 191 364 HE 013 010

AUTHOR Viehland, Dennis; Krauth, Barbara
TITLE Doctorate Production in the West, 1967-1977.
INSTITUTION Western Interstate Commission for Higher Education, Boulder, Colo.
PUB DATE Jul 80
NOTE 52p.
AVAILABLE FROM Western Interstate Commission for Higher Education P.O. Drawer P, Boulder, CO 80302

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Comparative Analysis; *Doctoral Degrees; Females; Graduate Study; Higher Education; *Majors (Students); Males; *Regional Characteristics; State Surveys; Statistical Data; *Student Characteristics
IDENTIFIERS *United States (West)

ABSTRACT

Information on doctoral degrees awarded in 13 western states is presented for 1967, 1972, and 1977. Tables indicate the distribution of doctorates awarded in the West by field for the three years and the increase or decrease in doctorates awarded in each field irrespective of changes in other fields. Additional information includes the distribution of doctorates by state, the proportion of national doctorates awarded in the West, and the distribution of doctorates awarded by sex of the recipient. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED191364

Project on Expanding Regional Cooperation in Graduate & Professional Education

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

WICHE

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

WICHE

Improving Education in The West

WICHE

The Western Interstate Commission for Higher Education is a nonprofit regional organization. It helps the thirteen member states cooperatively provide high-quality, cost-effective programs to meet the education and manpower needs of the West. Member states are Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Project Intent

The Project on Expanding Regional Cooperation in Graduate and Professional Education is developing and testing new models for interstate planning and resource sharing. Through the project, WICHE provides data to support planning and program review, assists state agencies and institutions in gathering data, and compiles an inventory of doctoral programs. The project is working closely with the states of Alaska, Idaho, Montana, Oregon, and Washington to develop and test a model for effectively sharing unique program resources and facilities. The results of this demonstration project will be disseminated widely as a model that may be useful to the other western states and to states in other regions. The graduate education project is supported by a grant from the Carnegie Corporation of New York and by WICHE state dues through its Student Exchange Program.

Staff

For further information, please contact:

WICHE — Phillip Sirotkin, Executive Director
William R. McConnell, Student Exchange Program Director

Project — Richard W. Jonsen, Project Director
Norman Kaufman, Senior Staff Associate
Barbara Krauth, Staff Associate
Dennis W. Viehland, Research Assistant
Cheryl Pedersen, Administrative Secretary
Dorothy Read, Secretary

DOCTORATE PRODUCTION IN THE WEST, 1967-1977

by

Dennis Viehland
Barbara Krauth

July 1980
Report 80-3

Western Interstate Commission for Higher Education
P.O. Drawer P Boulder, Colorado 80302

An Affirmative Action/Equal Opportunity Employer

This report was made possible (in part) by funds granted by the Carnegie Corporation of New York. The statements made and views expressed are solely the responsibility of the authors.

CONTENTS

Highlights 1

Introduction 2

Data 2

Distribution of Doctorates by Field 3

Distribution of Doctorates by State 4

Proportion of National Doctorates Awarded in the West 5

Distribution of Doctorates Awarded by Sex of Recipient 5

LIST OF TABLES AND FIGURES

Table 1 Doctorates Awarded in the West by Field, 1967, 1972, 1977 7

Table 2 Changes in Doctorates Awarded in the West and United States by Field, 1967-72, 1972-77, and 1967-77 8

Table 3 Change in Proportion of Doctorates Awarded in the West, 1967-77 9

Table 4 Doctorates Awarded in the West by State, 1967, 1972, 1977 10

Table 5 Percent of National Doctorates Awarded in the West by Field, 1967, 1972, 1977 11

Table 6 Doctorates Awarded in the West by Field and Sex of Recipient, 1967, 1972, 1977 12

Table 7 Doctorates Awarded in the West by State and Sex of Recipient, 1967, 1972, 1977 13

Figure 1 Change in Proportion of Doctorates Awarded in the West, 1967-77 9

Appendix A 15

HIGHLIGHTS

General Trends:

- Approximately one-fifth of all doctorates awarded in the United States in 1977 were granted in the West; this proportion remained approximately stable over the entire period, 1967-1977.
- Between 1967 and 1972, doctorate production increased slightly more than 60 percent, both in the West and nationally.
- Between 1972 and 1977, doctorate production declined 8.1 percent in the nation, but only 3.6 percent in the West.
- Fields of doctorates awarded are represented in the West in approximately the same proportions as in the nation as a whole.
- The proportion of doctorates awarded to women in the West increased from 9.6 percent in 1967 to 21.3 percent in 1977; nationally, the proportion of doctorates awarded to women increased from 12 percent in 1967 to 24.8 percent in 1977.
- The share of doctorates awarded nationwide increased in five western states from 1972 to 1977.

Field Differences:

- The field of psychology showed the greatest growth in numbers of degrees awarded between 1967 and 1977 in the West, increasing 213 percent.
- Degrees awarded in other social sciences increased from 328 in 1967 to 766 in 1977.
- Variations exist among fields in the proportion of national doctorates awarded. Western institutions awarded a high proportion of all doctorates in the earth, environmental, and marine sciences (37.3 percent) in 1977, and a low proportion of those in teaching fields (10.1 percent).
- The number of doctorate degrees granted in the West in language and literature increased from 248 in 1967 to 308 in 1977; there was also an increase in the number of degrees in other humanities fields (258 to 492).
- Physics and astronomy declined slightly in doctorate production--from 284 degrees in 1967 to 264 in 1977.
- Although most fields echoed the general pattern of increasing numbers of degrees granted between 1967 and 1972 and then decreasing numbers between 1972 and 1977, some fields exhibited a steady growth in numbers of degrees granted (see earth, environmental, and marine sciences; psychology; other social sciences; and other humanities).

Introduction

Although the dynamic growth of doctoral education that took place in the late 1960s and early 1970s is clearly over, it is important to note the specific changes that have taken place among fields, for some have declined in production of doctorates while others have continued to grow. The data provided here focus on the thirteen western states that make up the WICHE Compact; however, as noted throughout the report, the patterns among fields in the West are similar to those seen nationally.

Data

The data presented in this report are from the Doctorate Records File of the Commission on Human Resources of the National Research Council. Each year the National Research Council conducts its Survey of Earned Doctorates, which queries virtually all doctorate recipients in the United States to obtain information about their career plans, field of study, employment, and other facets of their graduate experience. The data for the western states were taken from the file via a special computer tabulation run in 1979. National data are derived from both the National Research Council publication, Century of Doctorates (1978), and the Council's annual Summary Reports for 1967, 1972, and 1977. Analysis of the data was completed by the staff of the Graduate Education Project of the Western Interstate Commission for Higher Education.

The years chosen for comparison (1967, 1972, and 1977) encompass a significant period for graduate education. The beginning of the period examined, 1967, approximates the middle of the boom in doctorate production; 1972 is the year in which national production peaked at 34,458 doctorates. In the following year the number decreased by almost 1,000, beginning the

decline that continued to 1977 and on to the present. That is, the years 1967 to 1972 were years of growth, while the years of 1972 to 1977 were years of decline. The period as a whole provides higher education planners with a retrospective look at the shifting patterns in doctorates awarded in the recent past.

Distribution of Doctorates by Field (Tables 1, 2, and 3)

Table 1 shows the distribution of doctorates awarded in the West by field for three years--1967, 1972, and 1977*--and the distribution of doctorates in the nation for 1977. The distribution among fields in the West for 1977 matches very closely the patterns of degrees awarded in the nation as a whole; in eight of the thirteen fields the difference between a field's share of total doctorate output in the West and the nation in 1977 was one percentage point or less.

Table 2 shows the increase or decrease in the doctorates awarded in each field irrespective of changes in other fields, and table 3 shows the change in each field relative to changes in the other fields. To illustrate how table 3 was derived from the data in table 1, consider the doctorates awarded in mathematics. In 1967 4.6 percent of all doctorates awarded were in mathematics. In 1977 that percentage had decreased to 3.0 percent. The difference in these figures, i.e., -1.6 percentage points, is the change in the percentage distribution for that field. Thus while table 2 shows an increase in the number of degrees awarded for the period (3.8 percent), table 3 reveals that, relative to changes in other fields, mathematics actually declined in productivity. Table 2 makes clear that between 1967

*The tables in Appendix A show the number of doctorates awarded in each field in each of the western states.

and 1972 overall production increased slightly more than 60 percent, regionally and nationally. On the other hand, between 1972 and 1977 the numbers of doctorates awarded decreased slightly, resulting in a net increase of 57.8 percent in the West and 49.3 percent in the nation between 1967 and 1977.

The changes presented in table 3 reveal some interesting field shifts in doctorates awarded in the West. The greatest proportional gains were in the social sciences, especially psychology, and--relative to other fields--education and other humanities. Four fields remained relatively constant (less than .5 percent change) while five others, including the physical sciences, had sharp declines in output in comparison to other fields. Interestingly, the category Other Humanities, which includes fields such as philosophy, history, art history, and music, experienced moderate growth during the period, but the language and literature fields showed slight declines.

Distribution of Doctorates by State (Table 4)

Within the WICHE region, the state of California dominates the production of doctorate-trained manpower. Table 4 reveals that in all three of the years examined California produced over half of all doctorates awarded in the West. A useful measure of assessing changes in the distribution of doctorate recipients by state is the ratio of change in percentage distribution also shown in table 4. This measure shows the ratio of the percentage of doctorates awarded in one year to the percentage of doctorates awarded in a subsequent year for each state. A ratio greater than 1.00 indicates that the state is increasing its production of doctorates relative to other states in the region, and a ratio less than 1.00 indicates that the state is losing doctorate production relative to the other states. Examination of

the figures for 1972 and 1977 reveals that the share of western doctorates declined in seven states and increased in five. One state, Alaska, remained the same.

Proportion of National Doctorates Awarded in the West (Table 5)

The West's contribution to national doctorate production has remained relatively stable during the eleven-year interval of 1967-1977. Table 5 reveals that in 1977 exactly one-fifth of all doctorates awarded in the United States were granted in the thirteen western states, although the proportion varied greatly from field to field. In 1977, a high of 37.3 percent in the earth, environmental and marine sciences is contrasted with a low of 10 percent for the educational teaching fields.

The increase of 1.0 percentage point from 1967 to 1977 for the WICHE region as a whole seems inconsequential. However, the significance of the West's increasing contribution to national doctorate production becomes clearer when changes for each field are examined. In only two fields (mathematics and language and literature) is the West's proportion of degree recipients decreasing. In the other nine fields for which data are available, an increasing proportion of degrees awarded reveals the relative strength of western doctorate production even during a time of general decline.

Distribution of Doctorates Awarded by Sex of Recipient (Tables 6 and 7)

Tables 6 and 7 show the distribution of doctorates awarded by sex of the recipient. The distribution by field, shown in table 6, reveals that, without exception, the proportion of doctorates awarded to women has increased in all fields in all years. In four of the seven fields, the percentage of doctorates received by women more than doubled between 1967

and 1977. Still, the number of doctorates awarded to women generally remained low, less than 10 percent in the physical sciences and engineering. In both the humanities and education, awards to women in 1977 accounted for more than 30 percent of the total.

Table 6 also provides comparative figures for the Unites States in 1977. These data disclose that the percentage of doctorates granted to women in the West (21.3 percent) in 1977 is lower than that for the nation as a whole (24.8 percent). Furthermore, only in the field of humanities is the proportion of female doctorate recipients even slightly higher in the West.

The data in table 7 are similar to that in table 6 except that the distribution is by state. The data are fairly straightforward and need little explanation. In general, the proportion of women receiving doctorate degrees in the West has increased over the time period in question. There are some exceptions, however, as two states (Hawaii and Wyoming) experienced a decline in women doctorate recipients between 1967 and 1972 and three states (Idaho, Montana, and Nevada) experienced a similar decline between 1972 and 1977. Three states (Alaska, Idaho, and Montana) were notably low in the proportion of doctorates awarded to women in 1977.

Table 1

Doctorates Awarded in the West by Field, 1967, 1972, 1977

	West			United States
	1967	1972	1977	1977
Mathematics	186 (4.6%)	257 (3.9%)	193 (3.0%)	959 (3.0%)
Physics and Astronomy	284 (7.1%)	338 (5.1%)	264 (4.2%)	1140 (3.6%)
Chemistry	294 (7.3%)	345 (5.2%)	306 (4.8%)	1570 (5.0%)
Earth, Environmental, and Marine Sciences	154 (3.8%)	184 (2.8%)	258 (4.1%)	691 (2.2%)
Engineering	572 (14.2%)	794 (12.1%)	637 (10.0%)	2641 (8.3%)
Life Sciences	655 (16.3%)	1064 (16.2%)	1029 (16.2%)	4767 (15.1%)
Psychology	203 (5.1%)	456 (6.9%)	637 (10.0%)	2960 (9.4%)
Other Social Sciences*	328 (8.2%)	656 (10.0%)	766 (12.1%)	3544 (11.2%)
Language and Literature	248 (6.2%)	381 (5.8%)	308 (4.9%)	1867 (5.9%)
Other Humanities*	258 (6.4%)	400 (6.1%)	492 (7.8%)	2692 (8.5%)
Professional Fields	101 (2.5%)	212 (3.2%)	184 (2.9%)	1340 (4.2%)
Education	603 (15.0%)	1113 (16.9%)	1055 (16.6%)	5389 (17.0%)
Teaching Fields*	132 (3.3%)	281 (4.3%)	207 (3.3%)	2059 (6.5%)
Unspecified	3 (-0-)	100 (1.5%)	7 (0.1%)	44 (0.1%)
TOTAL ALL FIELDS	4021 (100.0%)	6581 (100.0%)	6343 (100.0%)	31672 (100.0%)

* A list of specialties included in each field is given in tables in Appendix A.

Source: National Research Council.

Table 2

Changes in Doctorates Awarded in the West and United States by Field
1967-72, 1972-77 and 1967-77

Field	Percentage Change in Doctorates Awarded					
	West			United States		
	1967-72	1972-77	1967-77	1967-72	1972-77	1967-77
Mathematics	38.2%	-24.9%	3.8%	58.0%	-28.5%	13.0%
Physics and Astronomy	19.0%	-21.9%	-7.0%	24.7%	-32.3%	-15.6%
Chemistry	17.3%	-11.3%	4.1%	11.9%	-21.8%	-12.5%
Earth, Environmental, and Marine Sciences	19.5%	40.2%	67.5%	68.7%	-2.0%	65.3%
Engineering	38.8%	-19.8%	11.4%	33.3%	-24.4%	0.8%
Life Sciences	62.4%	-3.3%	57.1%	54.6%	-8.2%	41.9%
Psychology	124.6%	39.7%	213.8%	81.5%	1.5%	84.1%
Other Social Sciences	100.0%	16.8%	133.5%	73.8%	24.1%	115.6%
Language and Literature	53.6%	-19.2%	24.2%	73.9%	0.9%	75.5%
Other Humanities	55.0%	23.0%	90.7%	70.0%	-21.6%	33.1%
Professional Fields	109.9%	-13.2%	82.2%	90.7%	-17.6%	57.1%
Education	84.6%	-5.2%	75.0%	NA	-3.8%	NA
Teaching Fields	112.9%	-26.3%	56.8%	NA	19.9%	NA
TOTAL ALL FIELDS	63.7%	-3.6%	57.8%	62.4%	-8.1%	49.3%

Source: National Research Council

Table 3

Change in Proportion of Doctorates Awarded in the West
1967-1977

Field	Change in Proportion of Doctorates Awarded (1967-1977) [Percentage Points]
Increasing	
Psychology	+4.9
Other Social Sciences	+3.9
Education	+1.6
Other Humanities	+1.4
Stable	
Professional fields	+0.4
Earth, Environmental and Marine Sciences	+0.3
Teaching Fields	-0-
Life Sciences	-0.1
Decreasing	
Language and Literature	-1.3
Mathematics	-1.6
Chemistry	-2.5
Physics and Astronomy	-2.9
Engineering	-4.2

Note: Data derived from table 1; see text for explanation.

Figure 1

Change in Proportion of Doctorates Awarded in the West
1967-1977

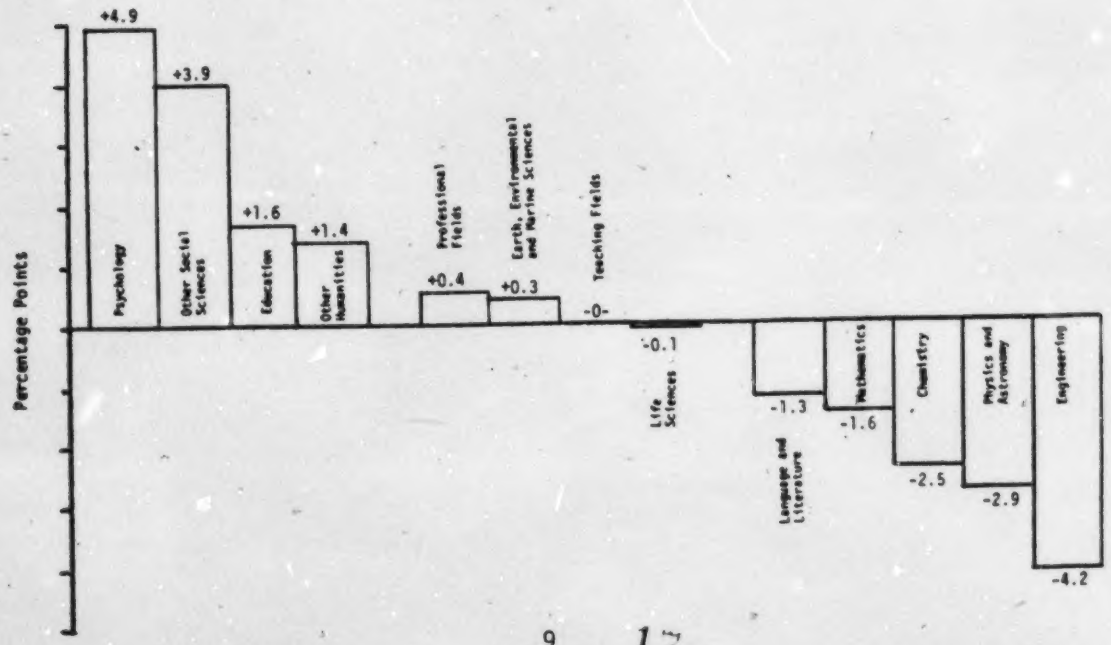

Table 4

Doctorates Awarded in the West by State
1967, 1972, 1977

State	1967	1972	1977	Ratio of Change in Distribution Percentage 1972/1967	1977/1972
Alaska	2 (0.1%)	3 (0.1%)	5 (0.1%)	1.00	1.00
Arizona	235 (5.8%)	383 (5.8%)	415 (6.5%)	1.00	1.12
California	2333 (58.0%)	3418 (51.9%)	3418 (53.9%)	.89	1.04
Colorado	378 (9.4%)	705 (10.7%)	703 (11.1%)	1.14	1.04
Hawaii	28 (0.7%)	80 (1.2%)	135 (2.1%)	1.71	1.75
Idaho	15 (0.4%)	58 (0.9%)	49 (0.8%)	2.25	.89
Montana	49 (1.2%)	70 (1.1%)	63 (1.0%)	.92	.91
Nevada	6 (0.2%)	21 (0.3%)	33 (0.5%)	1.50	1.67
New Mexico	84 (2.1%)	188 (2.9%)	163 (2.6%)	1.38	.90
Oregon	269 (6.7%)	549 (8.3%)	407 (6.4%)	1.24	.77
Utah	218 (5.4%)	487 (7.4%)	427 (6.7%)	1.37	.91
Washington	359 (8.9%)	541 (8.2%)	462 (7.3%)	.92	.89
Wyoming	45 (1.1%)	78 (1.2%)	63 (1.0%)	1.09	.83
WICHE States	4021 (100.0%)	6581 (100.0%)	6343 (100.0%)		
United States	21216	34458	31672		
WICHE as a Percent of U.S.	19.0%	19.1%	20.0%		

Source: National Research Council

Table 5

Percent of National Doctorates Awarded in the West by Field
1967, 1972, 1977

Field*	1967	1972	1977
Earth, Environmental and Marine Sciences	36.8%	26.1%	37.3%
Engineering	21.8%	22.7%	24.1%
Physics and Astronomy	20.9%	19.9%	23.0%
Life Sciences	19.5%	20.5%	21.6%
Other Social Sciences	17.0%	18.8%	21.6%
Psychology	14.8%	19.1%	21.5%
Mathematics	21.9%	19.2%	20.1%
TOTAL ALL FIELDS	19.0%	19.1%	20.0%
Education	NA	19.9%	19.6%
Chemistry	16.4%	17.2%	19.5%
Other Humanities	16.8%	15.0%	18.3%
Language and Literature	17.7%	16.0%	16.5%
Professional Fields	11.8%	13.0%	13.7%
Teaching Fields	NA	16.4%	10.1%

*Listed in 1977 rank order.

Source: National Research Council.

Table 6

Doctorates Awarded in the West by Field and Sex of Recipient
1967, 1972, 1977

FIELD		WEST 1967		WEST 1972		WEST 1977		United States 1977	
Physical Sciences	(Men)	878	(95.6%)	1064	(94.7%)	946	(92.7%)	3938	(90.1%)
	(Women)	40	(4.4%)	60	(5.3%)	75	(7.3%)	431	(9.9%)
Engineering	(Men)	569	(99.5%)	790	(99.5%)	626	(98.3%)	2567	(97.2%)
	(Women)	3	(0.5%)	4	(0.5%)	11	(1.7%)	74	(2.8%)
Life Sciences	(Men)	579	(88.4%)	916	(86.1%)	830	(80.7%)	3810	(79.9%)
	(Women	76	(11.6%)	148	(13.9%)	199	(19.3%)	957	(20.1%)
Social Sciences	(Men)	476	(89.6%)	906	(81.5%)	1047	(74.6%)	4674	(71.9%)
	(Women)	55	(10.4%)	206	(18.5%)	356	(25.4%)	1830	(28.1%)
Humanities	(Men)	414	(81.8%)	586	(75.0%)	505	(63.1%)	2903	(63.7%)
	(Women)	92	(18.2%)	195	(25.0%)	295	(36.9%)	1656	(36.3%)
Professional Fields	(Men)	98	(97.0%)	195	(92.0%)	147	(79.3%)	1037	(77.4%)
	(Women)	3	(3.0%)	17	(8.0%)	37	(20.1%)	303	(22.6%)
Education	(Men)	617	(83.9%)	1113	(79.8%)	882	(69.9%)	4864	(65.3%)
	(Women)	118	(16.1%)	281	(20.2%)	380	(30.1%)	2584	(34.7%)
Unspecified	(Men)	3		91		6		34	
	(Women)	-0-		9		1		10	
ALL FIELDS	(Men)	3634	(90.4%)	5661	(86.0%)	4989	(78.7%)	23827	(75.2%)
	(Women)	387	(9.6%)	920	(14.0%)	1354	(21.3%)	7845	(24.8%)

Source: National Research Council.

Table 7

Doctorates Awarded in the West by State and Sex of Recipient
1967, 1972, 1977

		1967	1972	1977
Alaska	(Men)	2 (100.0%)	3 (100.0%)	5 (100.0%)
	(Women)	-0- (-0-)	-0- (-0-)	-0- (-0-)
Arizona	(Men)	212 (90.2%)	327 (85.4%)	324 (78.1%)
	(Women)	23 (9.8%)	56 (14.6%)	91 (21.9%)
California	(Men)	2086 (89.4%)	2907 (85.0%)	2679 (78.4%)
	(Women)	247 (10.6%)	511 (15.0%)	739 (21.6%)
Colorado	(Men)	342 (90.5%)	594 (84.3%)	542 (77.1%)
	(Women)	36 (9.5%)	111 (15 7%)	161 (22.9%)
Hawaii	(Men)	25 (89.3%)	75 (93.8%)	105 (77.8%)
	(Women)	3 (10.7%)	5 (6.2%)	30 (22.2%)
Idaho	(Men)	14 (93.3%)	48 (82.8%)	45 (91.8%)
	(Women)	1 (6.7%)	10 (17.2%)	4 (8.2%)
Montana	(Men)	46 (93.9%)	65 (92.9%)	59 (93.7%)
	(Women)	3 (6.1%)	5 (7.1%)	4 (6.3%)
Nevada	(Men)	6 (100.0%)	16 (76.2%)	26 (78.8%)
	(Women)	-0- (-0-)	5 (23.8%)	7 (21.2%)
New Mexico	(Men)	76 (90.5%)	157 (83.5%)	119 (73.0%)
	(Women)	8 (9.5%)	31 (16.5%)	44 (27.0%)
Oregon	(Men)	249 (92.6%)	479 (87.2%)	313 (76.9%)
	(Women)	20 (7.4%)	70 (12.8%)	94 (23.1%)
Utah	(Men)	199 (91.3%)	437 (89.7%)	356 (83.4%)
	(Women)	19 (8.7%)	50 (10.3%)	71 (16.6%)
Washington	(Men)	335 (93.3%)	479 (88.5%)	362 (78.4%)
	(Women	24 (6.7%)	62 (11.4%)	100 (21.6%)
Wyoming	(Men)	42 (93.3%)	74 (94.9%)	54 (85.7%)
	(Women)	3 (6.7%)	4 (5.1%)	9 (14.3%)
WEST	(Men)	3634 (90.4%)	5661 (86.0%)	4989 (78.7%)
	(Women	387 (9.6%)	920 (14.0%)	1354 (21.3%)
United States	(Men)	NA (88.0%)	28735 (83.4%)	23827 (75.2%)
	(Women)	NA (12.0%)	5723 (16.6%)	7845 (24.8%)

Source: National Research Council.

APPENDIX A

Table A
Mathematics

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Arizona	6 (3.2%)	10 (3.9%)	6 (3.1%)	66.7%	-40.0%	-0-
California	116 (62.4%)	144 (56.0%)	127 (65.8%)	24.1%	-11.8%	9.5%
Colorado	12 (6.5%)	26 (10.1%)	15 (7.8%)	116.7%	-42.3%	25.0%
Hawaii	0 (-0-)	1 (0.4%)	0 (-0-)	NA	NA	NA
Idaho	0 (-0-)	2 (0.8%)	1 (0.5%)	NA	-50.0%	NA
Montana	3 (1.6%)	2 (0.8%)	4 (2.1%)	-33.3%	100.0%	33.3%
Nevada	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
New Mexico	7 (3.8%)	17 (6.6%)	10 (5.2%)	142.9%	-41.2%	42.9%
Oregon	12 (6.5%)	19 (7.4%)	9 (4.7%)	58.3%	-52.6%	-25.0%
Utah	6 (3.2%)	6 (2.3%)	9 (4.7%)	-0-	50.0%	50.0%
Washington	24 (12.9%)	23 (9.0%)	10 (5.2%)	-4.2%	-56.5%	-58.3%
Wyoming	0 (-0-)	7 (2.7%)	2 (1.0%)	NA	-71.4%	NA
WICHE States	186 (100.1%)	257 (100.0%)	193 (100.1%)	38.2%	-24.9%	3.8%
United States	849	1341	959	58.0%	-28.5%	13.0%
WICHE as a % of U.S.	21.9%	19.2%	20.1%			

NOTE: Includes Algebra, Analysis & Functional, Analysis, Geometry, Logic, Number Theory, Probability & Math. Statistics, Topology, Computer Sciences, Computing Theory & Practice, Operations Research, Applied Mathematics, Mathematics--General, Mathematics--Other

Table B
Physics and Astronomy

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	1 (0.4%)	NA	NA	NA
Arizona	11 (3.9%)	20 (5.9%)	23 (8.7%)	81.8%	15.0%	109.1%
California	215 (75.7%)	201 (59.5%)	162 (61.4%)	-6.5%	-19.4%	-24.7%
Colorado	12 (4.2%)	29 (8.6%)	25 (9.5%)	141.7%	-13.8%	108.3%
Hawaii	0 (-0-)	3 (0.9%)	2 (0.8%)	NA	-33.3%	NA
Idaho	0 (-0-)	5 (1.5%)	1 (0.4%)	NA	-80.0%	NA
Montana	1 (0.4%)	1 (0.3%)	3 (1.1%)	-0-	200.0%	200.0%
Nevada	1 (0.4%)	4 (1.2%)	5 (1.9%)	300.0%	25.0%	400.0%
New Mexico	11 (3.9%)	5 (1.5%)	7 (2.6%)	-54.5%	40.0%	-36.4%
Oregon	9 (3.2%)	18 (5.3%)	10 (3.8%)	100.0%	-44.4%	11.1%
Utah	12 (4.2%)	14 (4.1%)	7 (2.6%)	16.7%	-50.0%	-41.7%
Washington	12 (4.2%)	27 (8.0%)	14 (5.3%)	125.0%	-48.1%	16.7%
Wyoming	0 (-0-)	11 (3.3%)	4 (1.5%)	NA	-63.6%	NA
WICHE States	284 (100.1%)	338 (100.1%)	264 (100.0%)	19.0%	-21.9%	-7.0%
United States	1361	1697	1149	24.7%	-32.3%	-15.6%
WICHE as a % of U.S.	20.9%	19.9%	23.0%			

NOTE: Includes Atomic & Molecular, Electromagnetism, Acoustics, Fluids, Plasma, Optics, Thermal, Elementary Particles, Nuclear Structure, Solid State, Physics--General, Physics--Other Astronomy and Astrophysics.

Table C
Chemistry

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	1 (0.3%)	NA	NA	NA
Arizona	24 (8.2%)	21 (6.1%)	20 (6.5%)	-12.5%	-4.8%	-16.7%
California	160 (54.4%)	191 (55.4%)	171 (55.9%)	19.4%	-10.5%	6.9%
Colorado	19 (6.5%)	26 (7.5%)	17 (5.6%)	36.8%	-34.6%	-10.5%
Hawaii	2 (0.7%)	8 (2.3%)	8 (2.6%)	300.0%	-0-	300.0%
Idaho	2 (0.7%)	7 (2.0%)	3 (1.0%)	250.0%	-57.1%	50.0%
Montana	2 (0.7%)	6 (1.7%)	3 (1.0%)	200.0%	-50.0%	50.0%
Nevada	0 (-0-)	2 (0.6%)	1 (0.3%)	NA	-50.0%	NA
New Mexico	6 (2.0%)	8 (2.3%)	6 (2.0%)	33.3%	-25.0%	-0-
Oregon	19 (6.5%)	24 (7.0%)	23 (7.5%)	26.3%	-4.2%	21.1%
Utah	22 (7.5%)	20 (5.8%)	24 (7.8%)	-9.1%	20.0%	9.1%
Washington	34 (11.6%)	32 (9.3%)	24 (7.8%)	-5.9%	-25.0%	-29.4%
Wyoming	4 (1.4%)	0 (-0-)	5 (1.6%)	NA	NA	25.0%
WICHE States	294 (100.2%)	345 (100.0%)	306 (99.9%)	17.3%	-11.3%	4.1%
United States	1793	2007	1570	11.9%	-21.8%	-12.4%
WICHE as a % of U.S.	16.4%	17.2%	19.5%			

NOTE: Includes Analytical, Inorganic, Organic, Nuclear, Physical, Theoretical, Agricultural & Food, Pharmaceutical, Polymer, Chemistry--General, Chemistry--Other

Table D
Earth, Environment, and Marine Sciences

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	1 (0.6%)	2 (1.1%)	0 (-0-)	100.0%	NA	NA
Arizona	12 (7.8%)	19 (10.3%)	20 (7.8%)	58.3%	5.3%	66.7%
California	77 (50.0%)	79 (42.9%)	118 (45.7%)	2.6%	49.4%	53.2%
Colorado	22 (14.3%)	16 (8.7%)	33 (12.8%)	-27.3%	106.3%	50.0%
Hawaii	4 (2.6%)	4 (2.2%)	9 (3.5%)	-0-	125.0%	125.0%
Idaho	0 (-0-)	0 (-0-)	8 (3.1%)	NA	NA	NA
Montana	4 (2.6%)	2 (1.1%)	2 (0.8%)	-50.0%	-0-	-50.0%
Nevada	1 (0.6%)	3 (1.6%)	7 (2.7%)	200.0%	133.3%	600.0%
New Mexico	4 (2.6%)	11 (6.0%)	5 (1.9%)	175.0%	-54.5%	25.0%
Oregon	10 (6.5%)	21 (11.4%)	21 (8.1%)	110.0%	-0-	110.0%
Utah	6 (3.9%)	9 (4.9%)	8 (3.1%)	50.0%	-11.1%	33.3%
Washington	12 (7.8%)	13 (7.1%)	22 (8.5%)	8.3%	69.2%	83.3%
Wyoming	1 (0.6%)	5 (2.7%)	5 (1.9%)	400.0%	-0-	400.0%
WICHE States	154 (99.9%)	184 (100.0%)	258 (99.9%)	19.5%	40.2%	67.5%
United States	418	705	691	68.7%	-2.0%	65.3%
WICHE as a % of U.S.	36.8%	26.1%	37.3%			

NOTE: Includes Mineralogy--Petrology, Geochemistry, Stratigraphy--Sedimentation, Paleontology, Structural Geology, Geophysics (Solid Earth), Geomorph. & Glacial Geology, Applied Geol., Geol. Engr., Econ. Geol., Fuel Tech. & Petrol. Engr., Hydrology & Water Resources, Oceanography, Marine Sciences--Other

Atmospheric Physics and Chemistry, Atmospheric Dynamics, Atmospheric Sciences--Other, Environmental Sciences--General, Environmental Sciences--Other

Earth Sciences--General, Earth Sciences--Other

Table E
Engineering

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	1 (0.2%)	0 (-0-)	0 (-0-)	NA	NA	NA
Arizona	35 (6.1%)	47 (5.9%)	30 (4.7%)	34.3%	-36.2%	-14.3%
California	397 (69.4%)	532 (67.0%)	457 (71.7%)	34.0%	-14.1%	15.1%
Colorado	42 (7.3%)	73 (9.2%)	44 (6.9%)	73.8%	-39.7%	4.8%
Hawaii	0 (-0-)	3 (0.4%)	7 (1.1%)	NA	133.3%	NA
Idaho	0 (-0-)	4 (0.5%)	3 (0.5%)	NA	-25.0%	NA
Montana	9 (1.6%)	7 (0.9%)	1 (0.2%)	-22.2%	-85.7%	-88.9%
Nevada	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
New Mexico	18 (3.2%)	22 (2.8%)	18 (2.8%)	22.2%	-18.2%	-0-
Oregon	11 (1.9%)	14 (1.8%)	11 (1.7%)	27.3%	-21.4%	-0-
Utah	36 (6.3%)	49 (6.2%)	27 (4.2%)	36.1%	-44.9%	-25.0%
Washington	23 (4.0%)	41 (5.2%)	37 (5.8%)	78.3%	-9.8%	60.9%
Wyoming	0 (-0-)	2 (0.3%)	2 (0.3%)	NA	-0-	NA
WICHE States	572 (100.0%)	794 (100.2%)	637 (99.9%)	38.8%	-19.8%	11.4%
United States	2621	3493	2641	33.3%	-24.4%	0.8%
WICHE as a % of U.S.	21.8%	22.7%	24.1%			

NOTE: Includes Aeronautical & Astronautical, Agricultural, Biomedical, Civil, Chemical, Ceramic, Computer, Electrical, Electronics, Industrial, Nuclear, Engineering Mechanics, Engineering Physics, Mechanical, Metallurgy & Phys. Met. Engr., Systems Design & Systems Science, Operations Research, Fuel Tech. & Petrol. Engr., Sanitary & Environmental, Mining, Materials Science, Engineering--General, Engineering--Other

Table F
Life Sciences

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	1 (0.1%)	3 (0.3%)	NA	200.0%	NA
Arizona	42 (6.4%)	54 (5.1%)	70 (6.8%)	28.6%	29.6%	66.7%
California	330 (50.4%)	518 (48.7%)	536 (52.1%)	57.0%	3.5%	62.4%
Colorado	50 (7.6%)	88 (8.3%)	80 (7.8%)	76.0%	-9.1%	60.0%
Hawaii	15 (2.3%)	28 (2.6%)	33 (3.2%)	86.7%	17.9%	120.0%
Idaho	5 (0.8%)	10 (0.9%)	14 (1.4%)	100.0%	40.0%	180.0%
Montana	17 (2.6%)	22 (2.1%)	16 (1.6%)	29.4%	-27.3%	-5.9%
Nevada	0 (-0-)	0 (-0-)	3 (0.3%)	NA	NA	NA
New Mexico	1 (0.2%)	10 (0.9%)	16 (1.6%)	900.0%	60.0%	1500.0%
Oregon	59 (9.0%)	118 (11.1%)	87 (8.5%)	100.0%	-26.3%	47.5%
Utah	43 (6.6%)	85 (8.0%)	58 (5.6%)	97.7%	-31.8%	34.9%
Washington	85 (13.0%)	116 (10.9%)	97 (9.4%)	36.5%	-16.4%	14.1%
Wyoming	8 (1.2%)	14 (1.3%)	16 (1.6%)	75.0%	14.3%	100.0%
WICHE States	655 (100.1%)	1064 (100.0%)	1029 (100.2%)	62.4%	-3.3%	57.1%
United States	3360	5195	4767	54.6%	-8.2%	41.9%
WICHE as a % of U.S.	19.5%	20.5%	21.6%			

NOTE: Includes Agronomy, Agricultural Economics, Animal Husbandry, Food Science & Technology, Fish & Wildlife, Forestry, Horticulture, Soils & Soil Science, Animal Science & Animal Nutrition, Phytopathology, Agriculture--General, Agriculture--Other

Public Health & Epidemiology, Veterinary Medicine, Nursing, Parasitology, Environmental Health, Pathology, Pharmacology, Pharmacy, Medical Sciences--General, Medical Sciences--Other

Biochemistry, Biophysics, Biometrics & Biostatistics, Anatomy, Cytology, Embryology, Immunology, Botany, Ecology, Hydrobiology, Microbiology & Bacteriology, Physiology--Animal, Physiology--Plant, Zoology, Genetics, Entomology, Molecular Biology, Nutrition and/or Dietetics, Biological Sciences--General, Biological Sciences--Other

Table G
Psychology

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Arizona	13 (6.4%)	34 (7.5%)	51 (8.0%)	161.5%	50.0%	292.3%
California	110 (54.2%)	218 (47.8%)	355 (55.7%)	98.2%	62.8%	222.7%
Colorado	15 (7.4%)	47 (10.3%)	49 (7.7%)	220.0%	4.3%	233.3%
Hawaii	2 (1.0%)	4 (0.9%)	12 (1.9%)	100.0%	200.0%	500.0%
Idaho	0 (-0-)	1 (0.2%)	0 (-0-)	NA	NA	NA
Montana	1 (0.5%)	9 (2.0%)	9 (1.4%)	800.0%	-0-	800.0%
Nevada	4 (2.0%)	8 (1.8%)	12 (1.9%)	100.0%	50.0%	200.0%
New Mexico	2 (1.0%)	9 (2.0%)	10 (1.6%)	350.0%	11.1%	400.0%
Oregon	24 (11.8%)	50 (11.0%)	40 (6.3%)	108.3%	-20.0%	66.7%
Utah	19 (9.4%)	39 (8.6%)	57 (9.0%)	105.3%	46.2%	200.0%
Washington	13 (6.4%)	33 (7.2%)	34 (5.3%)	153.9%	3.0%	161.5%
Wyoming	0 (-0-)	4 (0.9%)	8 (1.3%)	NA	100.0%	NA
WICHE States	203 (100.1%)	456 (100.2%)	637 (100.1%)	124.6%	39.7%	213.8%
United States	1373	2386	2960	73.8%	24.1%	115.6%
WICHE as a % of U.S.	14.8%	19.1%	21.5%			

NOTE: Includes Clinical, Counseling & Guidance, Developmental & Gerontological, Educational, School Psychology, Experimental, Comparative, Physiological, Industrial & Personnel, Personality, Psychometrics, Social, Psychology--General, Psychology--Other

Table H
Social Sciences (Other than Psychology)

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Arizona	14 (4.3%)	15 (2.3%)	29 (3.8%)	7.1%	93.3%	107.1%
California	213 (64.9%)	385 (58.7%)	444 (58.0%)	80.8%	15.3%	108.5%
Colorado	24 (7.3%)	71 (10.8%)	91 (11.9%)	195.8%	28.2%	279.2%
Hawaii	2 (0.6%)	19 (2.9%)	36 (4.7%)	850.0%	89.5%	1700.0%
Idaho	1 (0.3%)	3 (0.5%)	2 (0.3%)	200.0%	-33.3%	100.0%
Montana	3 (0.9%)	1 (0.2%)	4 (0.5%)	-66.7%	300.0%	33.3%
Nevada	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
New Mexico	0 (-0-)	4 (0.6%)	8 (1.0%)	NA	100.0%	NA
Oregon	23 (7.0%)	47 (7.2%)	48 (6.3%)	104.3%	2.1%	108.7%
Utah	9 (2.7%)	29 (4.4%)	27 (3.5%)	222.2%	-6.9%	200.0%
Washington	39 (11.9%)	82 (12.5%)	75 (9.8%)	110.3%	-8.5%	92.3%
Wyoming	0 (-0-)	0 (-0-)	2 (0.3%)	NA	NA	NA
WICHE States	328 (99.9%)	656 (100.1%)	766 (100.1%)	100.0%	16.8%	133.5%
United States	1925	3493	3544	81.5%	1.5%	84.1%
WICHE as a % of U.S.	17.0%	18.8%	21.6%			

NOTE: Includes Anthropology, Communications, Sociology, Economics, Econometrics, Statistics, Geography, Area Studies, Political Science, Public Administration, International Relations, Urban & Reg. Planning, Social Sciences--General, Social Sciences--Other

Table I
Language and Literature

	Doctorates Awarded						Percentage Change		
	1967		1972		1977		67-72	72-77	67-77
Alaska	0	(-0-)	0	(-0-)	0	(-0-)	NA	NA	NA
Arizona	11	(4.4%)	21	(5.5%)	16	(5.2%)	90.9%	-23.8%	45.5%
California	156	(62.9%)	217	(57.0%)	176	(57.1%)	39.1%	-18.9%	12.8%
Colorado	23	(9.3%)	35	(9.2%)	29	(9.4%)	52.2%	-17.1%	26.1%
Hawaii	0	(-0-)	0	(-0-)	1	(0.3%)	NA	NA	NA
Idaho	0	(-0-)	0	(-0-)	5	(1.6%)	NA	NA	NA
Montana	0	(-0-)	0	(-0-)	0	(-0-)	NA	NA	NA
Nevada	0	(-0-)	4	(1.1%)	2	(0.7%)	NA	-50.0%	NA
New Mexico	13	(5.2%)	20	(5.3%)	19	(6.2%)	53.9%	-5.0%	46.2%
Oregon	11	(4.4%)	21	(5.5%)	19	(6.2%)	90.9%	-9.5%	72.7%
Utah	3	(1.2%)	30	(7.9%)	10	(3.3%)	900.0%	-66.7%	233.3%
Washington	31	(12.5%)	33	(8.7%)	31	(10.1%)	6.5%	-6.1%	-0-
Wyoming	0	(-0-)	0	(-0-)	0	(-0-)	NA	NA	NA
WICHE States	248	(99.9%)	381	(100.2%)	308	(100.1%)	53.6%	-19.2%	24.2%
United States	1403		2382		1867		70.0%	-21.6%	33.1%
WICHE as a % of U.S.		17.7%		16.0%		16.5%			

NOTE: Includes American, English, German, Russian, French, Spanish & Portuguese, Italian, Classical, Other Languages

Table J
Humanities (Other than Language and Literature)

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Arizona	4 (1.6%)	6 (1.5%)	10 (2.0%)	50.0%	66.7%	150.0%
California	160 (62.0%)	261 (65.3%)	309 (62.8%)	63.1%	18.4%	93.1%
Colorado	26 (10.1%)	35 (8.8%)	44 (8.9%)	34.6%	25.7%	69.2%
Hawaii	3 (1.2%)	8 (2.0%)	20 (4.1%)	166.7%	150.0%	566.7%
Idaho	2 (0.8%)	0 (-0-)	2 (0.4%)	NA	NA	-0-
Montana	0 (-0-)	2 (0.5%)	0 (-0-)	NA	NA	NA
Nevada	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
New Mexico	6 (2.3%)	15 (3.8%)	22 (4.5%)	150.0%	46.7%	266.7%
Oregon	15 (5.8%)	20 (5.0%)	25 (5.1%)	33.3%	25.0%	66.7%
Utah	8 (3.1%)	11 (2.8%)	18 (3.7%)	37.5%	63.6%	125.0%
Washington	34 (13.2%)	42 (10.5%)	41 (8.3%)	23.5%	-2.4%	20.6%
Wyoming	0 (-0-)	0 (-0-)	1 (0.2%)	NA	NA	NA
WICHE States	258 (100.1%)	400 (100.2%)	492 (100.0%)	55.0%	23.0%	90.7%
United States	1534	2667	2692	73.9%	0.9%	75.5%
WICHE as a % of U.S.	16.8%	15.0%	18.3%			

NOTE: Includes History & Criticism of Art, History--American, History--European, History--Other, History & Philosophy of Science, American Studies, Theatre and Theatre Criticism, Music, Speech as a Dramatic Art, Archeology, Religion, Philosophy, Linguistics, Comparative Literature, Humanities--General, Humanities--Other

Table K
Professional Fields

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Arizona	1 (1.0%)	14 (6.6%)	11 (6.0%)	1300.0%	-21.4%	1000.0%
California	64 (63.4%)	125 (59.0%)	106 (57.6%)	95.3%	-15.2%	65.6%
Colorado	6 (5.9%)	31 (14.6%)	23 (12.5%)	416.7%	-25.8%	283.3%
Hawaii	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Idaho	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Montana	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Nevada	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
New Mexico	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Oregon	12 (11.9%)	15 (7.1%)	14 (7.6%)	25.0%	-6.7%	16.7%
Utah	3 (3.0%)	12 (5.7%)	12 (6.5%)	300.0%	-0-	300.0%
Washington	15 (14.9%)	15 (7.1%)	18 (9.8%)	-0-	20.0%	20.0%
Wyoming	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
WICHE States	101 (100.1%)	212 (100.1%)	184 (100.0%)	109.9%	-13.2%	82.2%
United States	853	1627	1340	90.7%	-17.6%	57.1%
WICHE as a % of U.S.	11.8%	13.0%	13.7%			

NOTE: Includes Theology, Business Administration, Home Economics, Journalism, Speech & Hearing Sciences, Law & Jurisprudence, Social Work, Library & Archival Science, Professional Field--Other

Table L
Education (Other than Teaching Fields)

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Arizona	56 (9.3%)	98 (8.8%)	107 (10.1%)	75.0%	9.2%	91.1%
California	276 (45.8%)	389 (35.0%)	417 (39.5%)	40.9%	7.2%	51.1%
Colorado	93 (15.4%)	160 (14.4%)	187 (17.7%)	72.0%	16.9%	101.1%
Hawaii	0 (-0-)	2 (0.2%)	7 (0.7%)	NA	250.0%	NA
Idaho	5 (0.8%)	26 (2.3%)	10 (1.0%)	420.0%	-61.5%	100.0%
Montana	7 (1.2%)	18 (1.6%)	20 (1.9%)	157.1%	11.1%	185.7%
Nevada	0 (-0-)	0 (-0-)	2 (0.2%)	NA	NA	NA
New Mexico	13 (2.2%)	62 (5.6%)	35 (3.3%)	376.9%	-43.6%	169.2%
Oregon	49 (8.1%)	125 (11.2%)	66 (6.3%)	155.1%	-47.2%	34.7%
Utah	38 (6.3%)	134 (12.0%)	132 (12.5%)	252.6%	-1.5%	247.4%
Washington	34 (5.6%)	68 (6.1%)	54 (5.1%)	100.0%	-20.6%	58.8%
Wyoming	32 (5.3%)	31 (2.8%)	18 (1.7%)	-3.1%	-41.9%	-43.8%
WICHE States	603 (100.0%)	1113 (100.0%)	1055 (100.0%)	84.6%	-5.2%	75.0%
United States	NA	5601	5389	NA	-3.8%	NA
WICHE as a % of U.S.	NA	19.9%	19.6%			

NOTE: Includes Foundations--Social & Philosoph., Educational Psychology, Elementary Educ.--General, Secondary Educ.--General, Higher Education, Adult Educ. & Extension Educ., Educ. Meas. & Stat., Curriculum & Instruction, Educ. Admin. & Superv., Guid.-Couns.-Student Pers., Special Education (Gifted, Handicapped, etc.), Audio-Visual Media, Education--General, Education--Other

Table M
Education and Teaching Fields

	Doctorates Awarded			Percentage Change		
	1967	1972	1977	67-72	72-77	67-77
Alaska	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Arizona	6 (4.6%)	24 (8.5%)	22 (10.6%)	300.0%	-8.3%	266.7%
California	56 (42.4%)	63 (22.4%)	36 (17.4%)	12.5%	-42.9%	-35.7%
Colorado	34 (25.8%)	68 (24.2%)	66 (31.9%)	100.0%	-2.9%	94.1%
Hawaii	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Idaho	0 (-0-)	0 (-0-)	0 (-0-)	NA	NA	NA
Montana	2 (1.5%)	0 (-0-)	1 (0.5%)	NA	NA	-50.0%
Nevada	0 (-0-)	0 (-0-)	1 (0.5%)	NA	NA	NA
New Mexico	3 (2.3%)	5 (1.8%)	7 (3.4%)	66.7%	40.0%	133.3%
Oregon	15 (11.4%)	55 (19.6%)	33 (15.9%)	266.7%	-40.0%	120.0%
Utah	13 (9.9%)	49 (17.4%)	38 (18.4%)	276.9%	-22.5%	192.3%
Washington	3 (2.3%)	13 (4.6%)	3 (1.5%)	333.3%	-76.9%	-0-
Wyoming	0 (-0-)	4 (1.4%)	0 (-0-)	NA	NA	NA
WICHE States	132 (100.2%)	281 (99.9%)	207 (100.1%)	112.9%	-26.3%	56.8%
United States	NA	1717	2059	NA	19.9%	NA
WICHE as a % of U.S.	NA	16.4%	10.1%			

NOTE: Includes Agriculture Educ., Art Educ., Business Educ., English Educ., Foreign Languages Educ., Home Economics Educ., Industrial Arts Educ., Mathematics Educ., Music Educ., Phys. Ed.-Health-Recreation, Reading Education, Science Educ., Social Science Educ., Speech Education, Vocational Educ., Other Teaching Fields

Table N
All Fields

	Doctorates Awarded						Percentage Change		
	1967		1972		1977		67-72	72-77	67-77
Alaska	2	(0.1%)	3	(0.1%)	5	(0.1%)	50.0%	66.7%	150.0%
Arizona	233	(5.8%)	383	(5.8%)	415	(6.5%)	63.0%	8.4%	76.6%
California	2333	(58.0%)	3418	(51.9%)	3418	(53.9%)	46.5%	-0-	46.5%
Colorado	378	(9.4%)	705	(10.7%)	703	(11.1%)	86.5%	-0.3%	86.0%
Hawaii	28	(0.7%)	80	(1.2%)	135	(2.1%)	185.7%	68.8%	382.1%
Idaho	15	(0.4%)	58	(0.9%)	49	(0.8%)	286.7%	-15.5%	226.7%
Montana	49	(1.2%)	70	(1.1%)	63	(1.0%)	42.9%	-10.0%	28.6%
Nevada	6	(0.2%)	21	(0.3%)	33	(0.5%)	250.0%	57.1%	450.0%
New Mexico	84	(2.1%)	188	(2.9%)	163	(2.6%)	123.8%	-13.3%	94.1%
Oregon	269	(6.7%)	549	(8.3%)	407	(6.4%)	104.1%	-25.9%	51.3%
Utah	218	(5.4%)	487	(7.4%)	427	(6.7%)	123.4%	-12.3%	95.9%
Washington	359	(8.9%)	541	(8.2%)	462	(7.3%)	50.7%	-14.6%	28.7%
Wyoming	45	(1.1%)	78	(1.2%)	63	(1.0%)	73.3%	-19.2%	40.0%
WICHE States	4021	(100.0%)	6581	(100.0%)	6343	(100.0%)	63.7%	-3.6%	57.8%
United States	21216		34458		31672		62.4	-8.1%	49.3%
WICHE as a % of U.S.		19.0%		19.1%		20.0%			

NOTE: Includes all fields and subject areas given on previous tables. Also includes unspecified doctorates.

PROJECT ON EXPANDING REGIONAL COOPERATION
IN GRADUATE AND PROFESSIONAL EDUCATION

Advisory Council

Alaska

Kerry D. Romesburg
Executive Director
Alaska Commission on
Postsecondary Education
Pouch F--State Office Building
Juneau, Alaska 99811
(907) 465-2854

Arizona

Lela R. Alston
State Senator
Arizona State Senate
Capitol Building, Senate Wing
Phoenix, Arizona 85007
(602) 271-4485

William B. Phillips (Alternate)
Academic Planning Coordinator
Arizona Board of Regents
Education Building
1535 West Jefferson
Phoenix, Arizona 85007
(602) 255-4082

California

Harold Geiogue
Principal Program Analyst
Joint Legislative Budget Committee
925 L Street, Suite 650
Sacramento, California 95814
(916) 445-8641

Patrick Callan
Director
California Postsecondary
Education Commission
1020 Twelfth Street
Sacramento, California 95814
(916) 445-1000

Colorado

J. Russell Nelson
Chancellor
University of Colorado at Boulder
Boulder, Colorado 80309
(303) 492-8908

Jürgen Denk
Graduate Student Advisory Council
University Memorial Center, 1830
University of Colorado at Boulder
Boulder, Colorado 80309
(303) 492-6116

Hawaii

Howard P. McKaughan
Professor of Linguistics
Linquistics Department
University of Hawaii
1890 East-West Road
Honolulu, Hawaii 96822
(808) 948-7831

Idaho

Lawrence H. Rice
Dean of the Graduate School
Idaho State University
Pocatello, Idaho 83209
(208) 236-2150

Montana

JoEllen Estenson
Manpower Mental Health Project
Department of Institutions
1539 Eleventh Avenue, Room 315
Helena, Montana 59601
(406) 449-3964

Nevada

Eugene Grotegut
Professor of Foreign Languages
and Literature
University of Nevada
Reno, Nevada 89507
(702) 784-6857

New Mexico

McAllister Hull
Provost
The University of New Mexico
Albuquerque, New Mexico 87131
(505) 277-2611

John Aragon
President
New Mexico Highlands University
Las Vegas, New Mexico 87701
(505) 425-7511

Oregon

Loren L. Wyss
Member, Executive Committee
Oregon State Board of Higher Education
1430 American Bank Building
Portland, Oregon 97205
(503) 222-3600

Utah

Leon McCarrey
Deputy Commissioner and Director
of Academic Affairs and Planning
Utah State Board of Regents
807 East South Temple, Suite 204
Salt Lake City, Utah 84103
(801) 533-5617

Washington

Patrick Morgan
Department of Political Science
Washington State University
Pullman, Washington 99163
(509) 335-4025

Wyoming

Patrick Quealy
Trustee of the University of Wyoming
915 Pine Avenue
Kemmerer, Wyoming 83101
(307) 877-4421

PROJECT ON EXPANDING REGIONAL COOPERATION
IN GRADUATE AND PROFESSIONAL EDUCATION

Demonstration States Coordinating Committee

Alaska

Mildred Banfield
The Board of Regents
University of Alaska
Box 920
Auke Bay, Alaska 99821
(907) 789-7390

Arliss Sturgulewski
State Senator
2957 Sheldon Jackson Street
Anchorage, Alaska 99504
(907) 279-4939

Kerry Romesburg
Advisory Council

Idaho

Ralph Olmstead
State Representative
Route 2
Twin Falls, Idaho 83301
(208) 733-3047

Mark Toledo
Office of the Governor
State Capitol
Boise, Idaho 83720
(208) 334-2100

Clifford M. Trump (Alternate)
Deputy Director for Academic Planning
State of Idaho Board of Education
Len B. Jordan Office Building, Room 307
Boise, Idaho 83720
(208) 334-2270

Lawrence Rice
Advisory Council

Montana

Larry Fasbender
State Senator
Route 1, Box 23
Fort Shaw, Montana 59443
(406) 264-5730

John A. Richardson
Commissioner of Higher Education
Board of Regents of Higher Education
33 South Last Chance Gulch
Helena, Montana 59601
(406) 449-3024

JoEllen Estenson
Advisory Council

Oregon

Roy Lieuallen
Chancellor
Oregon System of Higher Education
P.O. Box 3175
Eugene, Oregon 97403
(503) 686-4153

Anthony Meeker
State Senator
Box 326
Amity, Oregon 97101
(503) 835-8481

Loren Wyss
Advisory Council

Washington

William Chance
Deputy Coordinator
Council for Postsecondary Education
908 Fifth Avenue
Olympia, Washington 98504
(206) 753-3245

Dan Grimm
State Representative
904 Seventh Avenue, S.W.
Puyallup, Washington 98371
(206) 845-2408

Patrick Morgan
Advisory Council